UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/661,632	09/15/2003	Chung-Sam Jun	253/033	7928

27849 7590 02/20/2007

LEE & MORSE, P.C.
3141 FAIRVIEW PARK DRIVE
SUITE 500
FALLS CHURCH, VA 22042

EXAMINER	
PATEL, JAYESH A	
ART UNIT	PAPER NUMBER
2624	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/20/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/661,632	JUN ET AL.	
	Examiner	Art Unit	
	Jayesh A. Patel	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *02/02/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Kane et al. (US 6326618) hereafter Kane.

1. Regarding Claim 1, Kane discloses a method for analyzing a sample by employing a Fast Fourier Transformation method, comprising: generating an image of a region of the sample to be analyzed in **(Fig 2C, Fig 13 and Col 1 Lines 1-5 and Lines 64-66);** generating data having a frequency from the image by the Fast Fourier Transformation method at **(Col 5 Lines 18-22)**; and analyzing the generated data to determine whether the region is normal or abnormal at **(Col 5 Lines 23-40 and Col 12 Lines 27-33)**.

2. Regarding Claim 2, Kane discloses the method for analyzing a sample by employing a Fast Fourier Transformation method as claimed in claim 1, wherein

the region includes a periodically formed pattern at **(Col 1 Lines 35-41 and Col 5 Lines 28-31)**.

3. Regarding Claim 3, Kane discloses the method for analyzing a sample by employing a Fast Fourier Transformation method as claimed in claim 1, wherein the region is formed on a semiconductor substrate and corresponds to a cell region including a periodic pattern at **(Col 5 Lines 28-31 and Col 2 Lines 1-2)**.

4. Regarding Claim 4, Kane discloses the method for analyzing a sample by employing a Fast Fourier Transformation method as claimed in claim 3, wherein the periodic pattern has a line width and is formed by an etching process at **(Col 1 Lines 39-41 and Col 2 Lines 1-2)**.

5. Regarding Claim 5, Kane discloses the method for analyzing a sample by employing a Fast Fourier Transformation method as claimed in claim 1, wherein the image is generated by a scanning electron microscope at **(Col 1 Lines 1-5 and Lines 64-66)**.

6. Regarding Claim 6, Kane discloses the method for analyzing a sample by employing a Fast Fourier Transformation method as claimed in claim 1, further comprising defining the image into at least two pixel units at **(Col 12 Lines 1-7)**.

7. Regarding Claim 7, Kane discloses the method for analyzing a sample by employing a Fast Fourier Transformation method as claimed in claim 1, further comprising providing an alarm when the region is abnormal at **(Col 13 Lines 45-56)**. Kane discloses the operator makes the adjustments to the manufacturing process in response to the information after comparison. **If there is no corresponding instruction for correcting the error** (alarm) the error and the associated data are stored in the database.

8. Regarding Claim 8, Kane discloses a method for analyzing a sample by employing a Fast Fourier Transformation method, comprising: generating a magnified image **(Fig 2C element 110 and 138)** of a minute pattern formed in a cell region of a semiconductor substrate **(Fig 13 and Col 1 Lines 1-5 and Lines 64-66)**; measuring a line width of the minute pattern using the magnified image at **(Col 4 Lines 63-67, Col 5 Lines 1-11 and Col 6 Lines 50-53)**; generating data having a frequency from the image by the Fast Fourier Transformation method at **(Col 5 Lines 18-22)**; and analyzing the generated data to determine whether the minute pattern is normal or abnormal at **(Col 5 Lines 23-40 and Col 12 Lines 27-33).**

9. Claim 9 is a corresponding apparatus Claim of a method performed by Claim 1.See the explanation of Claim 1.

10. Regarding Claim 10, see the explanation of Claim 5.

11. Regarding Claim 11, Kane discloses the apparatus **(in Fig 2C)** for analyzing a sample by employing a Fast Fourier Transformation method as claimed in claim 9, further comprising a display part for displaying the generated data at **(Col 12 Lines 7-8)**.

12. Regarding Claim 12,see the explanation of Claim 7.

13. Claim 13 is a corresponding apparatus claim preformed by a method of Claim 8.See the explanation of Claim 8.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jayesh A. Patel whose telephone number is 571-270-1227. The examiner can normally be reached on M-F 7.00am to 4.30 pm (5-4-9).If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on 571-272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jayesh Patel
02/16/07 JP

SAMIR AHMED
PRIMARY EXAMINER